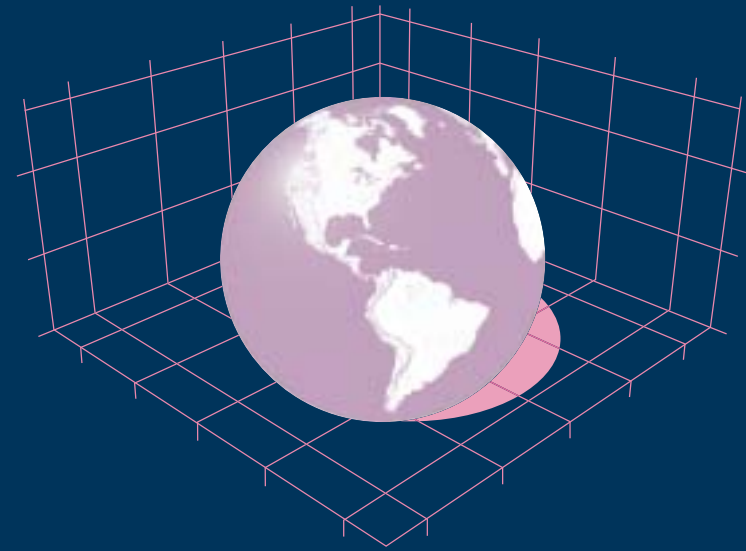


# 20<sup>±</sup>1 Annual Report

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AAES


American Association of Engineering Societies

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# Who We Are

“... *Advancing the knowledge, understanding, and practice of engineering.*”

The American Association of Engineering Societies (AAES) is a multidisciplinary organization of engineering societies dedicated to advancing the knowledge, understanding, and practice of engineering. AAES is located in Washington, DC and our membership is located throughout the United States. Our member societies represent the mainstream of U.S. engineering – more than one million engineers in industry, government, and academia. 

## 2001 Board of Governors

### Executive Committee (non-voting members)

Luther W. Graef, PhD, Chair

Theodore (Ted) Saito, PhD, Past Chair

Winfred Phillips, PhD, Chair-Elect

Paul J. Kostek, Secretary/Treasurer

Nellie E. Guernsey, Vice Chair

Kathryn Logan, Vice Chair

John R. Parker, Vice Chair

Harry Bradley, Vice Chair

Thomas J. Price, Executive Director

## Member Societies

### (Voting Members)

American Indian Science and Engineering Society

*Albuquerque, New Mexico*

Judy M. Gobert

Everett Chavez

American Institute of Chemical Engineers

*New York, New York*

Calvin Cobb

John Sofranko

American Institute of Medical and Biological Engineers

*Washington, DC*

Peer M. Portner

Kevin W. O'Connor

American Institute of Mining, Metallurgical and Petroleum Engineers

*New York, New York*

Grant P. Schneider

Nellie E. Guernsey

American Nuclear Society

*LaGrange Park, Illinois*

Gail H. Marcus

Harry Bradley

American Society for Engineering Education

*Washington, DC*

Wallace Fowler

Frank L. Huband

American Society of Agricultural Engineers

*St Joseph, Missouri*

Lyle E. Stephens, President

M. Melissa Moore, Executive Director

American Society of Civil Engineers

*Reston, Virginia*

H. Gerald Schwartz, Jr., President

James E. Davis, Executive Director

American Society of Mechanical Engineers

*New York, New York*

John R. Parker, President

David L. Belden, Executive Director

Association of Environmental Engineering and Science Professors

*Champaign, Illinois*

Robin Autenrieth, President

Domenico Grasso, Executive Director

Human Factors and Ergonomics Society

*Santa Monica, California*

David L. Post, President

Lynn Strother, Executive Director

Institute of Electrical and Electronics Engineers

*Washington, DC*

Ned R. Sauthoff, President

Daniel J. Senese, Executive Director

National Institute of Ceramic Engineers

*Westerville, Ohio*

Harrie Steven, President

Diane C. Folz, Executive Director

Optical Society of America

*Washington, DC*

David L. Hardwick, President

John A. Thorner, Executive Director

Society of Fire Protection Engineers

*Bethesda, Maryland*

Wayne D. Moore, President

Kathleen Almand, Executive Director

**Society of Hispanic Professional Engineers**

*Los Angeles, California*

Jose E. Rivera, President

**SPIE - International Society of Optical Engineering**

*Bellingham, Washington*

Richard B. Hoover, President

Eugene G. Arthurs, Executive Director

**Society of Women Engineers**

*Chicago, Illinois*

Shelly A. M. Wolff, President

Gina Ryan, Executive Director

Affiliate Member Societies

**Women in Engineering Programs  
and Advocates Network**

*West Lafayette, Indiana*

Susan Staffin Metz, President

Associate Member Societies

**Federation of Materials Societies**

*Washington, DC*

Lyle H. Schwartz, President

Betsy Houston, Executive Director

**Institute for Operations Research  
and Management Sciences**

*Linthicum, Maryland*

Thomas L. Magnanti, President

Mark R. Doherty, Executive Director

**Junior Engineering Technical Society**

*Alexandria, Virginia*

William C. Salmon, President

Harold Spiegelman, Executive Director

**National Action Council for Minorities in Engineering**

*New York, New York*

John B. Slaughter, Executive Director

**Tau Beta Pi Association**

*Knoxville, Tennessee*

Doug Green, President

James D. Froula, Executive Director

Regional Member Societies

**Engineering Society of Detroit**

*Detroit, Michigan*

William Birge, President

Lawrence E. Slimak, Executive Director

**Washington Society of Engineers**

*Washington, DC*

Lillian K. Stone

Observer

**National Academy of Engineering**

*Washington, DC*

Lance Davis, Executive Officer

## Committees of the Board

**Executive Committee**

Chair, Luther Graef

Charge: To oversee, on behalf of the Board of Governors, the duly authorized transactions of AAES business and, between meetings of the Board, exercise all powers and duties of the Board in accordance with applicable law and any policies or specific directives of the Board. The Executive Committee oversees administration and fiscal management of AAES organizational units, reports to the Board on the annual audit of AAES finances, and oversees the AAES staff compensation and benefits program.

**Awards Committee**

Chair, Paul Torpey

Charge: To oversee all AAES award activities and recommend to the Board the recipients of AAES awards to be presented at the annual AAES Awards Banquet & Ceremony held in conjunction with the May Board Meeting.

**Council on the Public Awareness of Engineering**

Chair, Victoria A. Rockwell

Charge: To have primary authority to address issues related to public awareness, recognition, and understanding of the engineering profession as approved by the Board.

**Engineers' Public Policy Council**

Chair, Luther Graef

Charge: To serve as the principal forum for the development of AAES policies affecting the professional and technical practice of engineering, and to coordinate efforts of AAES member societies on public policy issues that require a unified response.

#### Engineering Workforce Commission

Chair, Eleanor Baum

Charge: EWC has been a source of objective, timely data relating to the supply and demand for engineering and technology personnel since its organization in 1950. As an AAES Commission, EWC is composed of volunteers from professional engineering societies, academia, government, and industry.

#### Engineers' and Scientists' Joint Committee on Pensions

Chair, George McClure

Charge: To disseminate information regarding retirement benefits of engineers and scientists and provide a mechanism for engineering and scientific societies to coordinate their views on these issues.

#### Finance Committee

Chair, Paul Kostek

Charge: To develop and recommend to the Board an annual operating budget, long-range financial plans, and policies governing financial reserves and the investment of funds.

#### International Activities Commission

Chair, Luther Graef

Charge: To facilitate the exchange of ideas among its members and to communicate U.S. engineering concerns and views to the global engineering community through such organizations as the World Federation of Engineering Organizations (WFEO). To further the dialogue on sustainable technology issues through the Engineers Forum for Sustainable Development.

#### Nominating Committee

Chair, Paul Torpey

Charge: To nominate and present to the Board each December a list of people who can as AAES officers, required by the AAES Constitution and By-laws such as chairs and vice-chairs of AAES Councils, Committees, and Commissions. ⊕



*“ Our ability to reduce operational costs while achieving the same results enhanced membership value.”*

#### Message From the Chair

The year 2001 was a time of growth and transition at the American Association of Engineering Societies. The commitment and results produced by the AAES team — staff, member societies, volunteers, and my fellow Board members — is a great source of pride for all of us.

Our biggest swell of gratitude comes from a hard-fought year of reorganization. We restructured ourselves to become further effective in carrying out our mission. We streamlined our procedures and developed a more talented staff to focus on public policy and public awareness issues. The restructuring created a smaller AAES Board that will set, maintain, and measure outcomes of profession-wide goals and objectives for the engineering profession.

With an excellent 2001 audit report, AAES is financially sound. Our ability to reduce operational costs while achieving the same results enhanced membership value. For the first time in its history, AAES reached its financial goals this year by meeting reserve requirements.

In terms of membership development, I was pleased to welcome back the National Society of Professional Engineers to AAES in 2001. I believe we now represent more engineers in America than ever before, with more than 1 million engineers actively involved in our member societies.

AAES's most recognizable signpost, of course, is its Engineering Workforce Commission. Bolstered by unwavering support from its volunteers, the year 2001 saw the Commission doing its best work. With the addition of a marketing component this year, the Engineering Workforce Commission is poised to raise the bar on member services and to cultivate new members. The Engineering Workforce Commission surveys and publications are the best in the industry, continually endowing the profession with the most precision data on engineering workforce trends.

Apart from the Engineering Workforce Commission, AAES invests its resources in three primary objectives: public policy, public awareness, and international cooperation.

In 2001, AAES helped articulate a central voice in the engineering public policy arena. The Engineering Public Policy Committee provided the community a familiar place to be heard with a series of forums and receptions on Capitol Hill. In doing so, AAES set an unprecedented foundation for liaison on public policy issues with many U.S. federal agencies and Congress.

In public awareness, we accomplished milestones in 2001. With the diligent leadership of the Committee on Public Awareness for Engineering, the *Voices of Innovation* radio program, several years in the making, arrived at fruition. I believe *Voices of Innovation* is an extraordinary opportunity for AAES member societies. I am confident the radio program will be successful and effective in educating the U.S. public on the wonders of engineers. My hope is that each member society will fortify the potential of *Voices of Innovation* by sharing resources and stories with this dynamic public awareness product.

With 2001 award recipients like Wm. A. Wulf, Edmund O. Schweitzer III, and Sheila E. Widnall, and the acquisition of the John Fritz Medal, AAES's awards program has become more prestigious. I encourage all member societies in coming years to more freely nominate notable engineers from among us so that AAES's awards program continues to be viable and relevant.

While AAES reduced its in-house international program in 2001, it subcontracted work with the National Science Foundation to the Civil Engineering Research Foundation. This arrangement allowed us to minimize AAES resources while continuing to provide member societies reliable counsel on international cooperation. As a member of the World Federation of Engineering Organizations, AAES remains the prominent U.S representative on international engineering issues. In 2001, while I was AAES chair, I was elected to a four-year term on WFEO's Executive Council and appointed to its Awards Committee and Finance and Administration.

In closing, I would be remiss not to thank all the wonderfully dedicated AAES volunteers and staff who made the year a successful one. For me, it has been a true honor to be AAES Chair. I trust that the next years will be just as successful and that the results AAES gained in 2001 will bear fruit for many years to come.



Luther Graef  
2001 AAES Chair



*“AAES became further poised and forward-thinking in 2001. We are financially stronger today than we have been in more than a decade”*

## Message From the Executive Director

Two thousand and one was a landmark year for engineering and U.S. engineering societies. More than ever, the engineering community, members of Congress, and the general public are expanding their awareness of engineering issues.

For AAES, the year had us restructuring ourselves. The reorganization transitions AAES from a 50-plus-member board to one with nine members. The change liberates large resources once dedicated to more than 50 people for managerial and operational decision-making, allowing the group — now called the AAES Assembly — to focus clearly on public policy, public awareness, and engineering workforce issues.

AAES became further poised and forward-thinking in 2001. We are financially stronger today than we have been in more than a decade. Our public policy is more focused and our public awareness is aimed at presenting authentic and dynamic engineers to the public. And our Engineering Workforce Commission, 50 years in existence, continues to be the definitive center for reliable, accurate data on U.S. engineering workforce trends.

Here's a brief look at our 2001 accomplishments:

- We helped raise engineering research funding for the National Science Foundation. We worked closely with policymakers spearheading legislation on math, science, and engineering education — primarily House Science Committee member Congressman Vernon J. Ehlers (R-MI) — and continue to keep a sharp eye on evolving regulation.
- AAES hosted a Capitol Hill reception with the newly appointed chair of the House Science Committee, Congressman Sherwood A. Boehlert (R-NY). The gathering helped U.S. Congressional leadership to recognize the broader issues facing the U.S. engineering community.
- We convened a series of Congressional breakfasts in Washington. The inaugural breakfast was well attended and brought out Representatives Boehler, Constance A. Morella (R-MD), and Mark Udall (R-CO). Rep. Udall advocated the intrinsic value of having the engineering community involved in federal engineering decision-making.
- We created and launched the “Engineering a Better Quality of Life” ad campaign, which contained several advertisements publicizing engineering's function in everything from flame-retardant pajamas to clean drinking water. The ads appeared in 34 city newspapers and had the potential to edify millions of curious Americans.
- Working with renowned radio producer Jim Metzner, AAES created *Voices of Innovation*. Along with our public awareness colleagues from ASME and AIME, we visited Metzner's studio in New York, to see first hand how the 2-minute daily radio

program will allow engineers to speak with passion about their profession and about engineering's impact on quality of life.

- We enhanced our marketing program, by incorporating an advertising and promotion element to the Engineering Workforce Commission. This will help AAES better meet our engineering societies' needs, allowing the societies to be more proactive and responsive to engineering education requirements.
- After participating in Congressional Visits Day for many years, AAES decided in 2001 that it will take a natural next step and initiated an activity in 2002 called "Engineers Across America". The project will encourage member-society engineers from all 50 states to visit their members of Congress when he or she is in their home district.

By the end of 2001, when AAES moved its Washington, DC office to 1828 L Street NW, it seemed that not just our address had changed.

The U.S. engineering community's input to national security and public safety issues has become even more fundamental in the decision-making process after the September 11 attacks on America. From infrastructure to communications, the relevance of engineers in the federal and local decision-making process is more poignant today.

Terrorism at home has made Americans hungry for a better understanding of how machinery, mechanisms, and technology affect their daily lives. Mainstream media have responded by producing excellent reporting about engineering's role in transforming and rebuilding society. AAES will respond with *Voices of Innovation* and other public awareness campaigns that give Americans better channels for information.

*Voices of Innovation* is poised to meet America's new appetite for information about engineering and technology. The radio program will offer engineers and the public a beacon of accurate and fair reporting on engineering.

We acknowledge that present engineering employment trends are not meeting corporate America's demands, and the community must take action. We know that we must attract more women and minorities into the engineering profession.

Aligned with our community, a restructured AAES is prepared to help engineering societies lead in the 21st Century. We are devoted to providing effective representation for the profession before Congress, the general public, nongovernmental organizations, and the public and private sectors. ☺

Thomas J. Price  
Executive Director

# Programs

## Public Policy

Most of AAES's work in public policy is channeled through the Engineers' Public Policy Committee (EPPC). Each AAES member society appoints one or more volunteers and/or staff representatives to EPPC and its task forces according to their society's area of interest, priorities, and expertise.

EPPC coordinates and develops position statements on public policy that affect both the professional and technical practice of engineering. The Committee is a part of a broader public affairs program within AAES, which makes AAES positions and activities known to national policymakers and the public. EPPC keeps AAES and the engineering community aware of ongoing policy issues via its biweekly e-mail newsletter, *Fast Facts*.

## 2001 EPPC Officers

### Win Phillips

EPPC Chair

### George McClure, IEEE-USA

Engineers' & Scientists' Joint Committee on Pensions Chair

## 2001 Highlights

AAES worked throughout the year with a number of organizations on public policy issues concerning legislation — education and pension reform — and research and development — science, defense, energy, and space. The following are AAES's 2001 public policy accomplishments:

- Hosted a reception for Congressman Sherwood A. Boehlert (R-NY), upon his appointment as committee chair of the House Science Committee. Helped the committee prioritize its 2002 funding for the National Science Foundation, and supported advertisements in several papers, including *Roll Call*, encouraging key appropriators to increase support for NSF.
- Organized an ongoing series of breakfasts with Rep. Boehlert and members of the House Science Committee, providing an opportunity for engineering society staff and volunteers to discuss important issues with members of Congress. In 2002, AAES will work with member societies and Congressman Boehlert's office to set



Rep. Boehlert (right) and AAES Chair Luther Graef at AAES Hill reception



National Science Foundation Director, Rita R. Colwell (left), AAES Executive Director, Tom Price (center) and Rep. Boehlert at AAES Hill reception.

dates for additional breakfasts, as well as extend the opportunity for sponsorship to non-engineering societies.

- Worked on federal funding issues with both House and Senate staff at the Department of Defense, Department of Energy, and the National Aeronautics and Space Administration. Cosponsored Capitol Hill luncheons on aviation research and NASA space science research for Congressional and administration staff.
- Supported increased research and development at the Department of Defense, by helping to organize a congressional reception with Senator Trent Lott (R-MS) and Chief of the Office of Naval Research Admiral Paul Gaffney. Also, supported efforts by the Coalition for National Security Research in drafting a statement urging \$10 billion for the Department of Defense's 2002 Science and Technology budget. Drafted letters to Presidential candidates encouraging them to support robust investments in Department of Defense science and technology should they become President.
- Working closely with member society staff, helped organize several strategy meetings with Congressional staff on science, mathematics, engineering, and technology (SMET) education. Supported efforts to increase advocacy efforts by meeting with House and Senate staff in more than 50 offices to encourage co-sponsorship of Congressman Vernon J. Ehlers's (R-MI) SMET education bills. A significant portion of the work was concluded when the Elementary and Secondary Education Act was reauthorized at the end of the first session.
- Conducted several activities that helped pass comprehensive pension reform legislation. While reform measures nearly passed in 2000, the bill ultimately failed along with other tax measures. Coordinated a package of letters sent to the House, Senate, House Ways and Means Committee, and Senate Finance Committee regarding H.R. 1102, the Portman-Cardin Comprehensive Retirement Security and Pension Reform Act of 2000. The package included letters from several member societies, including the American Society of Mechanical Engineers (ASME), the American Chemical Society (ACS), the Institute of Electrical and Electronics Engineers (IEEE), the American Institute of Chemical Engineers (AIChE), and the National Society of Professional Engineers. Additionally, AAES organized a number of strategy meetings with ASME, ACS, IEEE, and AIChE to develop a coordinated strategy for advocacy for pension issues. ⊕

## Communications and Public Awareness

Most of AAES's work in communications and public awareness is channeled through the Committee on Public Awareness of Engineering (COPAE). COPAE is made up of volunteer and/or staff representatives from AAES member societies.

Victoria Rockwell from the American Society of Mechanical Engineering was COPAE chair in 2001. COPAE members bring a breadth of engineering disciplines to the table to ensure that AAES presents a broad and comprehensive view of engineering to the public. COPAE provides guidance and oversight on programs that enhance the public understanding of the impact of engineering.

### *Voices of Innovation*

Throughout 2001, AAES continued working with the nationally recognized radio personality and producer Jim Metzner on developing *Voices of Innovation* (VOI), a pilot radio program on engineering. Metzner produces *Pulse of the Planet*, which is broadcast to more than one million listeners daily on more than 300 public and commercial stations around the world, including Voice of America and the Armed Forces Radio Network.

Using five pilot programs that Metzner produced on topics such as the National Aeronautics and Space Administration's female test pilot for the SR-71 Blackbird, history of the Zipper, earthquake engineering, and a new robotic hand, AAES submitted funding proposals to the United Engineering Foundation, the National Science Foundation, and NASA. By the end of 2001, AAES received a generous grant from UEF (\$290,000) and an additional grant from NASA (\$50,000) — enough to begin first-year production of *Voices of Innovation*.

The funding helped AAES to enter a contract with Metzner, launch a web site ([www.voicesofinnovation.com](http://www.voicesofinnovation.com)), design a logo, and plan the radio program's 2002 production schedule. The web site allows viewers to submit story ideas directly to AAES.

In early 2002, Metzner hired a production team and began marketing *Voices of Innovation* to public and commercial radio stations. Broadcast of programs is expected later in the year.

voices  
of  
innovation



Voices of Innovation studio:  
AAES's David Gately and Tom Price,  
ASME's June Scangarello, AIME's  
Nellie Guernsey, and Jim Metzner

AAES has been busy fielding questions and gathering story ideas for *Voices of Innovation*. The initial success of the radio program is directly due to the wonderful support and collaboration by all AAES member societies. Between the end of 2001 and early 2002, approximately 35 story ideas were submitted to AAES, via the *Voices of Innovation* web site. The following is a sampling of member and non-member society publicity and collaboration for *Voices of Innovation* that helped fuel the number of story submissions:

- American Society of Civil Engineers distributed news of the launching of the web site in their email list serve.
- Institute for Electronic and Electrical Engineers ran a story in *IEEE Leadership Wire*, December 21, 2001, Vol. VI, No. 22
- American Society of Mechanical Engineers (ASME) placed a full-story, front-page article in its January 2002 issue of *ASME News*.
- American Nuclear Society (ANS) ran a story in their January 2002 newsletter.
- SAE — the Engineering Society For Advancing Mobility in Land Sea Air and Space — announced the web site launch in the "Washington Report" section of their January 2002 newsletter.
- The *Triangle Coalition Electronic Bulletin*, published by the Triangle Coalition for Science and Technology Education, publicized the radio program in its issue on November 29, 2001, Vol. 7, No. 42.
- *Progressive Engineer*, an online magazine and news source for the northeast and mid-Atlantic, placed news on its web site.
- National Society of Professional Engineer's American Engineering Campaign met with AAES staff to cultivate an exchange of story ideas.
- ASME reported to its Board the number of the story ideas about mechanical engineering that have been submitted.
- ANS, celebrating an anniversary in 2002, is working closely with AAES staff to foster an exchange of story ideas.

## Awards

AAES's Awards Program recognizes U.S. engineers whose outstanding achievements benefit the engineering community, the United States, and the world. In 2000, AAES received the honor of administering the John Fritz Medal, which the United Engineering Foundation previously administered.

The 2001 awards ceremony, at which awards were presented to the 2000 recipients, was held in early May at the Rayburn House Office Building in Washington, DC. The following is a brief description of the awards and their recipients.

AAES presented the **John Fritz Medal** to Paul C. W. Chu, director of the Texas Center for Superconductivity. The medal, one of the most prestigious awards within the engineering community, is presented for scientific or industrial achievement in any field of pure or applied science. It was established in 1902 as a memorial to the great engineer whose name it bears.

Edmund O. Schweitzer, founder of Schweitzer Engineering Laboratories, received the **National Engineering Award**, one AAES' highest honor. It is presented on behalf of the engineering community to those engineers whose careers and accomplishments have particularly benefited humanity.

Sheila E. Windall, professor of aeronautics and astronautics at the Massachusetts Institute of Technology, received the **AAES Chair's Award**. The award recognizes outstanding individuals who have contributed to our nation or to the engineering profession in ways that demonstrate significant applications of engineering to the uses and needs of humanity.

The **Kenneth Andrew Roe Award** was presented to Wm. A. Wulf, president of the National Academy of Engineering. The Roe Award acknowledges members of the engineering community who have made visible progress in promoting cooperation, understanding, and unity among U.S. engineering societies, furthering the good of the entire engineering community.

AAES presented the **Engineering Journalism Award** to Jonathan Knight of *New Scientist Magazine* for his article "The Art of Glass." The journalism award recognizes outstanding reporting of an event or issue that furthers the public understanding of engineering.

### ■ John Fritz Medal



Paul C. W. Chu

### ■ National Engineering Award



Edmund O. Schweitzer

### ■ AAES Chair's Award



Sheila E. Windall

### ■ Kenneth Andrew Roe Award



Wm. A. Wulf

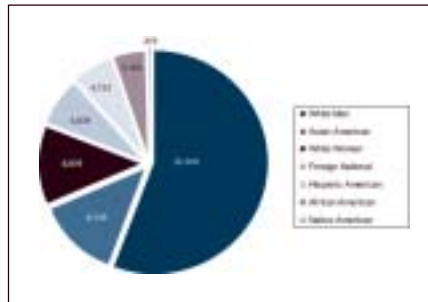
### ■ Engineering Journalism Award



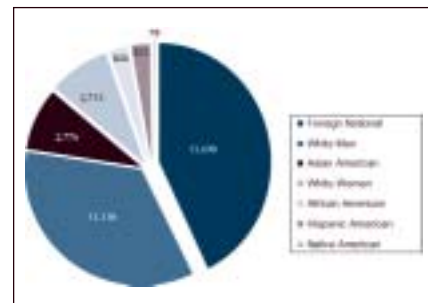
Jonathan Knight

## Engineering Workforce Commission

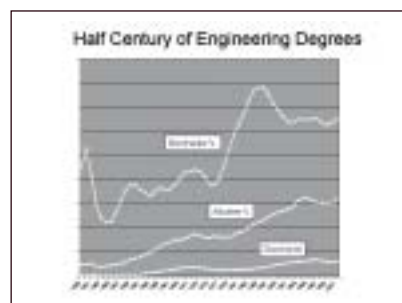
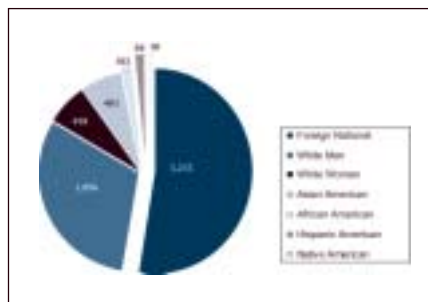
Engineering Bachelor's Degrees in 2001



Engineering Master's Degrees in 2001



Engineering Doctoral Degrees in 2001



AAES's Engineering Workforce Commission gathers engineering job statistics that help universities, corporations, and government monitor salary, hiring, enrollment, and degree trends in the marketplace. Each year it publishes three major surveys regarded as the most accurate, objective, and timely reports about the engineering workforce:

- Engineering & Technology Degrees
- Engineering & Technology Enrollments
- Engineers' Salaries: Special Industry Report

Began in 1950, EWC's degrees and enrollments surveys are hallmark successes today.

### 2001 Highlights

Last year, EWC continued to conduct surveys, publish reports, and participate in workforce meetings in Washington, DC and throughout the United States. Highlights in 2001 include enhancing its marketing component and contributing data to participating member societies that helped them apply for grants and analysis statistics on minority engineers.

Here's a brief look at our 2001 EWC accomplishments:

- EWC held a full commission meeting in conjunction with the AAES Engineering Alliance, where several EWC members gave presentations. The National Action Council for Minorities in Engineering explained how they use EWC data when analyzing trends on minority engineers, and the Semiconductor Research Corporation showed how they used of EWC data in a successful grant application for education funding.
- At a workshop hosted by the National Technical Services Association (NTSA), EWC gave a presentation on engineering workforce data. (NTSA's CEO attended EWC's presentation.) NTSA is a membership organization of more than 250 technical services companies, providing a wide range of engineering, science, and technology professional staffing services to public and private businesses.
- During the last quarter of 2001, EWC hired a marketing manager to promote and sell EWC products and membership. With the marketing manager on board, EWC created a multiyear business plan, which was implemented in early 2002. The plan emphasizes membership services and value.

### What goes into an EWC survey?

EWC gathers data on engineering students and faculty through surveys sent directly to the engineering colleges. The surveys ask colleges to report the number of students enrolled in each engineering discipline, by indicators such as year, gender, and ethnicity. With this data, EWC is able to present a detailed record of engineering student populations from one year to the next. No other organization is able to achieve the high participation rates, level of detail, or timely publication schedule that EWC achieves each year.

EWC also collects data on the salaries of engineering faculty, which it publishes biennially. The data are presented at a summary level and by several subcategories, including engineering discipline, length of contract, Ph.D.-granting status, and professorial rank.

Finally, EWC conducts an annual salary survey of engineering companies. The surveys are sent to human relations staff of approximately 3,000 companies to collect data on salary level, education, supervisory status, and years of experience of each engineer. EWC is then able to publish data -10th, 25th, 50th, 75th, and 90th percentiles - by region, industry, and company size. No other research organization collects such a large sample of salary data directly from engineering companies.

### EWC Membership

Industry and academia become members of EWC through its five associate programs: Patron Sustaining, Senior Sustaining, Sustaining, Academic, and Contributing. Membership offers engineering companies and universities a direct way to support EWC's activities, publications, and programs.

EWC academic membership includes more than 500 engineering and technology schools in the United States, of which 330 are ABET-accredited.

Although media are not EWC members, they often contact AAES looking for EWC data as a resource for stories about engineers in the workplace.

The following is a list of EWC's 2001 associate program members:

**Patron Sustaining Associates**

*GE Fund*  
Fairfield, Connecticut  
*National Action Council for Minorities in Engineering*  
New York, New York

**Senior Sustaining Associates**

*Chevron Corporation*  
San Francisco, California  
*General Motors Corporation*  
Detroit, Michigan  
*Procter & Gamble*  
Cincinnati, Ohio

**Sustaining Associates**

*Boeing Company*  
Chicago, Illinois  
*Deere & Company*  
Moline, Illinois  
*Dupont Company*  
Wilmington, Delaware  
*Eastman Chemical Company*  
Kingsport, Tennessee  
*Eastman Kodak Company*  
Rochester, New York  
*Exxon Mobil Corporation*  
Fairfax, Virginia  
*IBM Research*  
White Plains, New York  
*Institute of Industrial Engineers*  
Norcross, Georgia  
*Intel Corporation*  
Chandler, Arizona  
*Lockheed Martin*  
Bethesda, Maryland  
*National Semiconductor Corporation*  
Santa Clara, California  
*Raytheon*  
Lexington, Massachusetts  
*Schlumberger Oilfield Services*  
Houston, Texas  
*Semiconductor Research Corporation*  
Durham, North Carolina

*Texas Instruments*  
Dallas, Texas

*Union Carbide Corporation*  
South Charleston, West Virginia

**Academic Associates**

*Air Force Institute of Technology*  
Wright-Patterson AFB, Ohio  
*University of Akron*  
Akron, Ohio  
*Alabama A&M University*  
Huntsville, Alabama  
*University of Alabama*  
Tuscaloosa, Alabama  
*University of Alaska*  
Fairbanks, Arkansas  
*Arizona State University*  
Tempe, Arizona  
*University of Arizona*  
Tucson, Arizona  
*Boston University*  
Boston, Massachusetts  
*Bradley University*  
Peoria, Illinois  
*California Polytechnic State University*  
San Luis Obispo, California  
*California State Polytechnic University*  
Pomona, California  
*California State University*  
Los Angeles, California  
*University of California*  
Berkeley, California  
*Carnegie Institute of Technology*  
Pittsburgh, Philadelphia  
*Case Western Reserve University*  
Cleveland, Ohio  
*The Catholic University of America*  
Washington, DC  
*University of Central Florida*  
Orlando, Florida  
*Clarkson University*  
Potsdam, New York

*Clemson University*  
Clemson, South Carolina

*Colorado School of Mines*  
Golden, Colorado

*University of Colorado*  
Boulder, Colorado

*University of Dayton*  
Dayton, Ohio

*University of Delaware*  
Wilmington, Delaware

*University of Detroit*  
Mercy, Michigan

*Drexel University*  
Philadelphia, Pennsylvania

*Embry-Riddle Aeronautical University*  
Daytona Beach, Florida

*Florida International University*  
Miami, Florida

*University of Florida*  
Gainesville, Florida

*George Mason University*  
Fairfax, Virginia

*Georgia Institute of Technology*  
Atlanta, Georgia

*University of Hawaii*  
Honolulu, Hawaii

*University of Houston*  
Houston, Texas

*Howard University*  
Washington, DC

*Illinois Institute of Technology*  
Chicago, Illinois

*University of Illinois*  
Chicago, Illinois

*Indiana University Purdue University Indianapolis*  
Indianapolis, Indiana

*University of Iowa*  
Iowa City, Iowa

*Johns Hopkins University*  
Baltimore, Maryland

*Kansas State University*  
Manhattan, Kansas

*University of Kansas*  
Lawrence, Kansas

*Kettering University*  
Flint, Michigan

*University of Louisville*  
Louisville, Kentucky

*Marquette University*  
Milwaukee, Wisconsin

*University of Maryland*  
Baltimore, Maryland

*Massachusetts Institute of Technology*  
Cambridge, Massachusetts

*University of Massachusetts*  
Amherst, Massachusetts

*University of Miami*  
Miami, Florida

*Michigan State University*  
East Lansing, Michigan

*Michigan Technological University*  
Houghton, Michigan

*University of Michigan*  
Dearborn, Michigan

*University of Minnesota*  
Minneapolis, Minnesota

*Mississippi State University*  
University, Mississippi

*University of Missouri*  
Rolla, Missouri

*Morgan State University*  
Baltimore, Maryland

*University of Nebraska*  
Lincoln, Nebraska

*University of Nevada*  
Las Vegas, Nevada

*New Jersey Institute of Technology*  
Newark, New Jersey

*The College of New Jersey*  
Ewing, New Jersey

*North Carolina State University*  
Raleigh, North Carolina

*Northern Arizona University*  
Flagstaff, Arizona

*Norwich University*  
Northfield, Vermont

*University of Notre Dame*  
Notre Dame, Indiana

*Ohio Northern University*  
Ada, Ohio

*Pennsylvania State University*  
Abington, Pennsylvania

*University of Pennsylvania*  
Philadelphia, Pennsylvania

*University of Pittsburgh*  
Pittsburgh, Pennsylvania

*Purdue University*  
West Lafayette, Indiana

*Rensselaer Polytechnic Institute*  
Troy, New York

*Rose-Hulman Institute of Technology*  
Terre Haute, Indiana

*San Jose State University*  
San Jose, California

*University of South Florida*  
Tampa, Florida

*Southern Illinois University*  
Carbondale, Illinois

*Southern Methodist University*  
Dallas, Texas

*Southern Polytechnic State University*  
Marietta, Georgia

*Southern University*  
Baton Rouge, Louisiana

*Stanford University*  
Palo Alto, California

*State University of New York*  
Binghamton, New York

*State University of New York*  
Buffalo, New York

*State University of New York*  
Stony Brook, New York

*Syracuse University*  
Syracuse, New York

*Temple University*  
Philadelphia, Pennsylvania

*Tennessee State University*  
Nashville, Tennessee

*University of Texas - Pan American*  
Edinburgh, Texas

*Texas A&M University*  
College Station, Texas

*University of Texas*  
Arlington, Texas

*University of Texas*  
Austin, Texas

*University of Toledo*  
Toledo, Ohio

*Tufts University*  
Medford, Massachusetts

*Vanderbilt University*  
Nashville, Tennessee

*Virginia Polytechnic Institute and State University*  
Blacksburg, Virginia

*Washington University*  
St. Louis, Missouri

*University of Washington*  
Seattle, Washington

*Wayne State University*  
Detroit, Michigan

*Wentworth Institute of Technology*  
Boston, Massachusetts

*University of Wisconsin*  
Madison, Wisconsin

*Wright State University*  
Dayton, Ohio

**Contributing Associates**

*American Institute of Aeronautics and Astronautics*  
Washington, DC

*National Society of Professional Engineers*  
Washington, DC

## Publications

Distinguished by their authority and timeliness, AAES publications are renowned within the engineering community. *The Role of Engineering in Sustainable Development*, *The International Directory of Engineering Societies and Related Organizations*, and *Who's Who in Engineering* serve as indispensable reference materials for anyone interested in the engineering profession.

Annual surveys, such as *Engineering and Technology Enrollments and Engineering and Technology Degrees*, have provided engineering educational statistics for more than 30 years. *Engineer's Salaries: Special Industry Report* is one of the oldest and largest salary surveys available. *Engineers* - EWC's quarterly bulletin - provides valuable information on current trends and issues within the engineering profession through insightful analysis and thoughtful commentary.

EWC also offers publications services such as custom reports of the various educational and compensation statistics.

### General Publications

#### *Engineers*

In-depth reports on all aspects of engineering careers, including: education and the pipeline of students, measure of demand, employment forecasts, compensation trends, information on women and minorities in the profession, and worldwide workforce data.

#### *The Role of Engineering in Sustainable Development*

Prepared by leading authorities on engineering for sustainable development, this collection of key papers, references, and policy statements from major engineering organizations is an essential introduction to this topic. It includes an extensive annotated bibliography.

#### *International Directory of Engineering Societies and Related Organizations: 1999-2000, 16th Edition*

A comprehensive guide to engineering and technical organizations throughout the world. It includes information on each organization's objectives, members, elected officers, principal staff, publications, and federation affiliations.

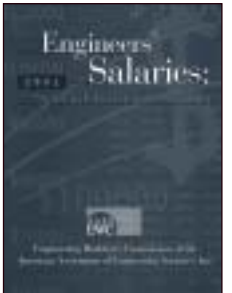
#### *Who's Who in Engineering, 9th Edition*

This publication lists more than 15,000 of the world's leading engineers, selected for professional recognition of their achievements, honors, and awards. The volume covers the entire spectrum of engineering, including nominations from industry, government, education, and professional societies.

## 2000-2001 Publications

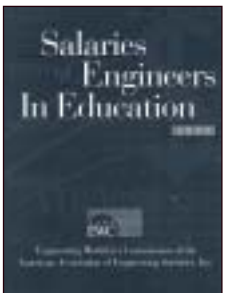
#### *Engineers' Salaries: Special Industrial Report, 2001*

One of the oldest and largest salary surveys in the world, cited in texts of compensation management. The latest edition of the Engineering Workforce Commission's annual study of compensation provides statistics on the salaries of more than 38,000 engineers in industry and government, including details for industrial sectors, geographic regions, and size of employers.



#### *Salaries of Engineers in Education, 2001*

The Engineering Workforce Commission's biennial survey of academic compensation presents median, quartile, decile, and mean salaries of engineers in educational institutions.



#### *Engineering & Technology Enrollment, Fall 2000*

The Engineering Workforce Commission's annual survey of fall enrollments contains the most detailed, accurate, rapidly produced data of its kind, providing comprehensive statistics on engineering and technology students.



#### *Engineering & Technology Degrees, 2001*

Comprehensive information on engineering and engineering technology degrees awarded in the 2000-2001 academic year. Includes statistics for schools and states on awards in 40 disciplines. ⊕



# International

In 2001, AAES's international program consisted of work in the following three activities:

- World Federation of Engineering Organizations/ Committee on Technology
- International Activities Commission
- Engineers Forum for Sustainable Development

## 2001 International Highlights

### *World Federation of Engineering Organizations / Committee on Technology*

- As a result of AAES's restructuring, future management of AAES' work with the World Federation of Engineering Organizations (WFEO) and the Committee on Technology (ComTech) transferred in 2001 to the American Society of Civil Engineering affiliate, the Civil Engineering Research Foundation, Institute for Energy Conservation. Supported by a four-year grant from the National Science Foundation, AAES is a representative to WFEO and hosts the ComTech Secretariat.
- In April, WFEO/ComTech presented an engineering experts panel at a United Nations' Commission on Sustainable Development spring meeting. The gathering, Engineered Energy Technologies, brought practical information to UN delegations and an engineering dimension to the dialogue on sustainability issues. Highlights include:
  - Luther Graef, 2001 AAES chair, served as moderator.
  - Four case studies were featured: solar cooking in Honduras; water purification technology in Japan; energy generation plant in New Zealand; and wind energy in New Caledonia.
  - Following the presentation, a written report was widely distributed, including to the AAES's Board of Governors.

- In June, ComTech facilitated the International Waters Workshop with a grant from the Global Environment Facility (GEF). The workshop, a collaboration of WFEO and the Federation Internationale des Ingenieurs Conseils (FIDIC), brought 60 senior design and building executives to Washington to discuss ideas of how to engage the private sector in GEF water projects.
- At a September General Assembly, James W. Poirot retired as ComTech president. His six-year leadership - the six years as ComTech president included four years as WFEO vice president - was remarkable for achieving important milestones for the engineering profession. Donald V. Roberts, a geotechnical and environmental engineer with an international reputation in sustainable development, succeeds Poirot.

### *International Activities Commission*

- The International Activities Commission (IntAC) held three meetings in 2001. IntAC's chair is William E. Kelly, dean of engineering at The Catholic University of America and member of the American Society for Engineering Education (ASEE). IntAC's mission is to facilitate the exchange of ideas among its members and to communicate U.S. engineering concerns and views to the world engineering community through organizations like WFEO. Information to AAES through IntAC, a valuable aspect of AAES' international program, brings international views on shared interests to the U.S. engineering profession.

### *Engineers Forum for Sustainable Development*

- The Engineers Forum for Sustainable Development (EFSD) held three meetings in 2001. EFSD, sponsored by AAES and ASEE, provides a vehicle to broadly gather and disseminate information on sustainable development in the United States. EFSD members are from academia, government, and the private sector. ⊕



## 2001 AAES Staff

Jane Alspach  
Program Manager, CREF/IEC

Daniel Bateson  
Publications Manager

Matthew Doster  
Director, Engineering Workforce Commission

David R. Gately  
Director, Communications and Public Awareness

Rebecca Jones  
Communications Associate

Thomas Jones  
Director, Public Policy

Connie L. Kyle  
Office Manager

Alysa Lebeau  
Marketing Manager

Melissa Murray  
Public Policy Associate

Thomas J. Price  
Executive Director